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A GREAT ENTERPRISE.

A Reduction Works That Saves All Values in Sulphide Ores to be Erected in Kingman.

After thorough investigation of the mineral deposits in Mohave County, which was made by and under the supervision of C. G. Andrews, of Los Angeles, California, we are pleased to state that Mr. Andrews has informed us that his company will erect a plant of this character in Kingman.

The capacity of the reduction works to be constructed will be 500 tons daily but will start off with a daily capacity of 250 tons.

The process used saves all the values of sulphide ores that are burdened with an excessive percentage of zinc, exemplifying the value of a process that is undoubtedly destined to exert a far-reaching, well nigh revolutionary effect on the mining industry of Arizona and southern California.

Zinc has been the plague of mining operators of this locality, for the ore bodies of the area thus comprehended carry a large proportion of this refractory element. The result has been that hundreds of thousands of tons of low grade ore lie on the dumps of the Arizona mining camps and an untold number of tons of such ore have been left underground as unavailable. It is safe to say there are 300,000 tons of ore in the vicinity of Chloride with values carrying from five to fifteen dollars per ton that has been considered practically worthless because of the proportion of zinc it contained.

The smelters will not take ore carrying in excess of ten per cent. of zinc, and the zinc of the ore they do take is not only a complete loss to the miner but the cause of an expense, for a penalty of 5 cents per unit is charged for the metal.

Yet zinc is a commodity worth from five to six cents per pound, therefore well worth the saving. The attempt to save the zinc with the ordinary smelter methods however would result in a destruction of the other values.

The process of this company accomplishes the saving of all of the values, zinc included, without impairment to any, performing its highly important work by separating the zinc from the other metals in the ore.

In the first place the ore is crushed to a 3 mesh fineness then it is roasted, and in the character of the roasting consists one of the essential features of the process for the roasting must be such as will reduce the ore to the right degree of disintegration.

After the roasting the ore is transferred to the leaching tanks where a chemical solvent cuts the zinc out in solution and its precipitation occurs, leaving a highly desirable smelting flux, a concentrate of ideal character that could only be otherwise produced by heat intense enough to destroy the zinc. After precipitation the zinc is recovered in the form of an oxide, and may be easily reduced into bars, sheets or any other commercial condition desired.

The Gold Hill Reduction Company's process is not a matter of mechanism, therefore it does not require any complicated, expensive or newly patented device. With the exception of the assistance rendered in the roasting, the process' function is performed entirely through a chemical agency—the solvent referred to. The solvent, itself, is a comparatively inexpensive article. The following example will illustrate the difference in results between the ordinary treatment of ore and that accorded by the process of the Gold Hill Reduction Company:

Assay value of ore treated.	
Gold.....	00.15 oz.
Silver.....	16.10 oz.
Lead, per cent.....	9.6
Zinc, per cent.....	26.3
Smelter returns, f. o. b. smelter, on this ore should be:	
Gold.....	00.15 oz. \$ 3 00
Silver.....	16.10 oz. 8 53
Total.....	\$11 53
Less 5 per cent.....	53 \$11 00
Lead, 9.6 per cent. at 25c. per ct.	2 40
	\$13 40

Less smelting charges per ton	\$10 00
Less zinc penalty on 16.3 per cent at 50c.....	\$8 15
	\$18 15
Charges exceed values.....	\$4 75
Gold Hill Reduction Company's process:	
Gold.....	\$ 3 00
Lead, 9.6 per cent. equals 192 lbs. @ 4 1/4 cents.....	8 16
Silver.....	8 53
Zinc saved.....	458 lbs.
Less loss refining.....	92 lbs.
Zinc, 366 lbs. @ 5 1/2.....	\$20 13
	\$39 82
Cost of treating and refining..	12 00
Net balance.....	\$27 82

It will be seen that under the common treatment, the producer of the above lot of ore would be 4.75% "worse off than nothing," the smelting charges exceeding the values obtained that much. With the treatment of the Gold Hill Reduction Company however, there is a net profit of 27.82%, this result being accomplished chiefly by the saving of the values in zinc, that otherwise would have been lost to the producer. From 80 to 90 per cent of the total zinc values are saved.

The cost of treating ore with this process will vary from 3.00% to 5.00% per ton, so that any ore whose value exceed the latter figure will be eligible for treatment, no matter what the percentage of zinc. There is a deep significance in this fact. It means the rescue of millions of dollars from the dumps and the development of hundreds of low grade properties in Mohave County alone. In potential effect, this process whereby so vast an amount of supposedly refractory ore can be utilized to practically its full metal value, is bound to surpass even cyanidizing.

The site for the plant has been selected and work on the foundation will soon be commenced.

Gold Stealing.

The question of gold stealing in Western Australia has recently been again before the Chamber of Mines of Western Australia. In a recent issue of the monthly magazine it is stated that some eighteen months ago there were fifty receivers known to the police, of whom one gentleman, whose record was disclosed, was able to dispatch through his bank about 500 ounces of smelted gold a month. The state of affairs was in fact so bad that the Police Act was amended to deal with the matter, and for the time apparently with satisfactory results. Familiarity, however, is said to be now breeding, if not contempt, at least skill, in evasion, and the Chamber is asking for more drastic penalties. At the same time difficulties are no doubt experienced in administering the law from popularity of the practice as revealed by the extent of the loss. Western Australia is not the only field which suffers; it is a common complaint co-extensive with gold mining. Where fields differ it is within the power or good will of the legislature and executive to curb the practice. As a rule with colored labor, as in the Transvaal, where obstacles to drastic legislation are not the same as among white miners who enjoy the franchise, the question is more easily dealt with, though in British Guiana we have been told the administration dare not interfere, and the difficulty in the case of large mines being opened would be a most serious one. West Africa, too, does not seem to be well situated in this respect, and the local paper bears witness to the extent of the practice on the Kolar field. In the Transvaal the leaders of the mining industry, with their Kimberly I. D. B. experience, possess perhaps the most effective legal control. Under Sec. 248 of the present Gold Law trading in the commodity with a native involves a maximum penalty of £1,000 fine or five years imprisonment, or both, while in the case of the colored person for the fine fifty lashes is substituted. The same penalties are provided under Sec. 12 of the Unwrought Precious Metals Trading Ordinance of 1903. This act

further restricts the trade to licensed traders (who must pay £25 a year), bankers and claim holders as regards the produce of their own claims, under maximum penalties of £500 fine or two years imprisonment, or both for a first offence and for subsequent transgressions the same penalties as for trading with a colored person. One important provision is that a register must be kept in which within twenty-four hours all transactions are recorded, showing parties, price, and weight of metal, under penalty of £50 fine, or in default six months' imprisonment. It is a common feature of such legislation that the accused has to establish his innocence, and the temptation to "traps" is, of course, such that among white communities there is great reluctance to entrust the police with the arbitrary power which the executive of such measures involves. At the same time it is probably more satisfactory to all concerned than to adopt a system of scrutiny and search, the effect of which in the case of the Lucknow mines will be remembered by many. In a good many cases something might be done by Acts of local application to consult public convenience without diminishing the efficiency of the control.—London Mining Journal,

Industrious Youth in Mining Operation.
The son naturally falls into the ways of his father. As an illustration of this fact, in a cert in back yard in Tombstone, about six small boys averaging about ten years of age, sons of miners and mining men, have sunk a shaft thirty feet deep with a drift about fifteen feet long. They have a perfect hoisting system and bell code. Their mothers' clothes lines got a little the worst of the bell code, but it is perfect, even to "man on" and the order "all set" goes forth with a perfunctory neatness that is admirable.

Yesterday a Porpector reporter was taking observations on the work, one of the youngsters announced in stentorian tones in the shaft, "I am going on top." As he emerged with his sleeves rolled to his shoulders and a candlestick in his belt, he shrugged his shoulders disdainfully and announced for the benefit of all present, "The work in that drift is the rottenest I ever saw, and I don't propose to stand for it. If I had a ten year old kid that couldn't do a better job of timbering than that I'd set him to piling spuds." After a brief consultation with the management, however, the young man returned to work, and another piano box was converted into shaft lining.

The boys are preparing to sell stock for development purpose. The parents keep cases on the condition of the ground, of course, so that no accident will occur, then encourage the boys to investigate all the "dips, spurs and angles" of modern mining. Those boys with proper encouragement will know more about mining and mine manipulations in a year than half the experts and two-thirds of the lawyers. They are Tombstone boys, which means that they have the stuff in them to make business men.—Prospector.

Noble Sentiments.

The following from a speech by the late senator George F. Hoar may be termed his declaration of faith:
"I have no faith in fatalism, in destiny, in blind force. I believe in God, the living God. I believe in the American people, who do not bow the neck or bend the knee to any other, and who desire no other to them. I believe that the God who created this world has ordained that His children may work out their own salvation, and that His nations may work out their own salvation by obedience to His laws, without any dictation or coercion from any other. I believe that liberty, good government, free institutions, cannot be given by any one people to any other but must be wrought out for each by itself, slowly, painfully, in the process of years or centuries, as the oak adds ring to ring. I believe that a republic is greater than an empire. I believe that the moral law and the golden rule are for nations as well as for individuals. I believe in George

Washington, no in Napoleon Bonaparte; in the Whigs of the Revolutionary day, not in the Tories; in Chatham Burke and Sam Adams' not in Dr. Johnson or Lord North. I believe that the north star, abiding in its place, is a greater influence in the universe than any comet or meteor. I believe that the United States, when William McKinley was inaugurated, was a greater world power than Rome in the height of her glory, or even England with her 400,000 vassals. I believe whatever clouds may darken the horizon that the world is growing better; that today is better than yesterday, and tomorrow will be better than today.

Mr. R. D. O'Neill, who is vice president of the Gold Mining Assurance company, is in the city for the purpose of purchasing supplies for his camp, which is located at the postoffice known as Old Glory, due south of here, and almost on the Mexican line, says the Tucson Citizen. The company of which the gentleman is an officer is an eastern corporation composed mostly of Indiana and Michigan capitalists and has only been in operation since last July. The proposition is a placer mine and the company has 1760 acres of ground in its possession. "We are working fifteen men at present," said Mr. O'Neill yesterday; "the principal thing under way just now being the construction of a 2,000,000 gallon reservoir, which will be in operation about the first of the year. Whether we can start work then remains to be seen, of course. We may have to wait for the rains next spring. We are also putting up a company store and an office, and in short, are making preparations for lots of work, and the force will be increased just as soon as that is justified. Our ground assays anywhere from ten cents up to 2.50% per cubic yard, or, as we figure it, the average will run about 1% per yard. We have sunk numerous shafts and otherwise thoroughly tested the ground and are confident that we have a big proposition before us."

"I was much afflicted with sciatica," writes E. L. C. Nud, Iowa, Sedgwick Co., Kan., "going about on crutches and suffering a deal of pain. I was induced to try Ballard's Snow Liniment, which relieved me. I used three 50c. bottles. It is the greatest liniment I ever used; have recommended it to a number of persons; all express themselves as being benefited by it. I now walk without crutches, able to perform a great deal of light labor on the farm. 25c. 50c. \$1.00 Sold by H. H. Watkins.

The News-Herald says: At the camp of the Amalgated Gold Mines Company at Cholla, near Quartzite, things are moving along in a lively fashion at the present, and quite a little settlement is springing up.

The company has completed a residence for Superintendent Reemer; a cottage for his assistants, storekeepers, etc.; a store building, a boarding-house for employees and a large barn. A lodging-house and other buildings are in course of construction. There are about thirty men at the camp.

Grading for the 120 stamp mill has been completed and work will soon be begun on the building. Plans for the mill have been drawn by a firm of Prescott architects, but have not yet been approved. Sixty stamps only will be used at first, and the other sixty will be added later. Forty of the stamps are now on the ground. It is expected that the mill will be in operation early next year. The company will use cement mortar-blocks in the mill, instead of the usual wooden ones. Work has been delayed to some extent by a failure to receive consignments of cement when expected. The power will be steam. There are at this place two 160-horse-power boilers awaiting shipment. A rock breaker is on the wagon, and will be sent out in a day or two. Besides this machinery, there are several carloads of lumber and other material on the sidetrack at this station. The company has twelve teams in its employ at the present time, and is rushing supplies to the front as fast as circumstances will permit.

We handle only Levi Strauss overalls. All sizes. THE EMPORIUM.

Good Spirits.

Good spirits don't all come from Kentucky. Their main source is the liver—and all the fine spirits ever made in the Blue Grass state could not remedy a bad liver or the hundred and one ill effects it produces. You can't have good spirits and a bad liver at the same time. Your liver must be in a fine condition if you would feel buoyant, happy and hopeful, bright of eye, light of step, vigorous and successful in your pursuits. You can put your liver in fine condition by using Green's August Flower—the greatest of all medicines for the liver and stomach and a certain cure for dyspepsia or indigestion. It has been a favorite household remedy for over thirty-five years. August Flower will make your liver healthy and active and thus insure you a liberal supply of "good spirits." Trial size, 25c; regular bottles, 75c. At all druggists.

Fifty Years the Standard



Made from pure cream of tartar derived from grapes.

PRICE BAKING POWDER CO., CHICAGO.